TRANSMITTAL LETTER (Large Entity) Applicant(s): David Russell Evans			Docket No. SLA0587 (SMT0335)
Serial No 09/270,606	Filing Date March 17, 1999	Examiner M. Anderson	Group Art Unit 1765

Invention: Method for Modification of Polishing Pattern Dependence in Chemical Mechanical Polishing

TO THE BOARD OF PATENT APPEALS AND INTERFERENCES:

Transmitted herewith is a Reply to Examiner's Answer in the above-identified application.

As the deadline for responding fell on Sunday, February 29, 2004, it is Applicant's understanding that Monday, March 01, 2004 is the current deadline for this reply.

If an extension is required, please consider this a request for a one-month extension and charge any associated extension fee to the deposit account as provided below.

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Dated: March 1, 2004

Matthew D. Rabdau, Reg. No. 43,026

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office under 37 C.F.R. §1.8 at Fax No. (703) 872-9306 on March 1, 2004.

Matthew D. Rabdau, Reg. No. 43,026

Note: Each paper must have its own certificate or transmission, or this certificate must identify each submitted paper. The papers submitted include:

_x_	This Amendment Transmittal Letter (Include Duplicate)	2 page(s)
_x_	Response under 37 CFR § 1.111	5 page(s)
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:		PATENT APPLICATION	
Inventor:	David Russell Evans		
Serial No:	09/270,606	Group No.:	1765
Filed:	March 17, 1999	Examiner:	M. Anderson
Title:	METHOD FOR MODIFICATION OF POLISHING PATTERN DEPENDENCE IN CHEMICAL MECHANICAL POLISHING		

REPLY BRIEF TO EXAMINER'S ANSWER
(37 C.F.R. §1.193)

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ATTENTION: Board of Patent Appeals and Interferences

Applicants respectfully submit this reply brief in support of the appeal to the rejection of the claims in the above-identified application.

The Notice of Appeal was filed in this case on May 5, 2003.

The Appeal Brief was filed on September 12, 2003.

The Examiner's Answer was mailed on December 31, 2003.

REPLY

In his Response to Argument, the Examiner contends that the applicant wishes to make "dishing" a part of his claim. This is not the case; rather applicant is providing support to show

that a problem exists within the CMP art. This problem involves the undesirable polishing of low structures during polishing of high structures. Admittedly, the fact that low structures are polished while high structures remains is counterintuitive. However, this is a known problem in the CMP art. This undesired polishing of low structures corresponds to the discussion of dishing in Kodera et al., along with the solution of providing dummy structures.

Despite the detailed discussion of the dishing problem and its solution in one of the embodiments of Kodera et al., the Examiner continues to disregard this problem when considering other embodiments of Kodera et al. These other embodiments do not discuss the dishing problem simply because it is not relevant to those embodiments. It is inappropriate to argue that silence as to a known problem eliminates the problem, or render its solution obvious.

On page 8 of the Examiner's Answer, the Examiner states, "From Fig. 19E to Fig. 19F one of ordinary skill would surmise that the rate of polishing in the recesses was substantially zero since the thickness of the planarized oxide surface and the thickness of the recessed oxide surface of the not planarized surface were the same." However, "When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value." See *Hockerson-Halberstadt, Inc. V. Avia Group Int'l,* 222 F.3d 951, 956. (MPEP 2125). The discussion of Figs. 19, does not discuss the scale of the drawings.

Appellant again notes that the Kodera reference (U.S. 5,445,996) contains multiple separate and distinct embodiments, along with a lengthy discussion of the prior art. These embodiments include, but are not limited to the following examples: i} the use of ceria based slurry to proved a CMP process that is free of scars (See Column 19, line 49 through Column 20 line 49, referring to Figs. 19A –19F); ii} the use of an overlying stopper film, which has a lower

polishing rate, to reduce or eliminate the "dishing" phenomenon (See Column 24, line 17 through Column 26, line 12, referring to Figs. 21-27); **iii}** a polishing apparatus (See Column 36, line 64 through Column 37, line 63, referring to Figs. 40-43; and **iv}** a method for redressing the polishing cloth to maintain the polishing rate of the polishing cloth over time (See Column 42, line 56 through Column 44, line 26, referring to Figs. 49 – 51). These multiple and varied embodiments provide a virtual toolkit of elements that, if not considered carefully, may provide a means for engaging in inappropriate hindsight analysis.

In the Examiner's Grounds for Rejection, he combines language from col. 20 lines 45-50, col. 40 lines 3-11, col. 37 lines 44-64, and col. 44 line 10. Each of these references refers to specific language within four very distinct inventions described by Kodera et al. For example, the Examiner states, "The lack of an etch stop layer or dummy structure is disclosed in col. 37 lines 44-64." However, read in its entirety that section relates to a polishing apparatus that is able to detect the when the insulating film being polished has been planarized. This embodiment is silent as to the rate of polishing of low structures relative to high structure, other than that eventually the high structures are removed. One cannot assume that this implies that low structures have been left essentially untouched. For example, the fact that a car traveling 75 mph will eventually pass one that is traveling 10 mph does not imply that the one traveling 10 mph is not moving.

Given the proposed combination of four distinct inventions contained in Kodera et al. with additional elements from Glover et al. and Burke et al, and an absence of any suggestion to combine the references, applicant concludes that the proposed combination was reached through inappropriate hindsight. In response, the Examiner states that this analysis is proper, "so long as it takes into account only knowledge which was within the level of ordinary skill at the time the

claim invention was made, and does not include knowledge gleaned from the applicant's disclosure", citing *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

However, most, if not all, inventions are combinations of old elements, an Examiner may find every element of a claimed invention in the prior art. There is a need to show a motivation, or suggestion to combine the references that create the case of obviousness. *In re Rouffet*, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). In concluding that a claim is obvious, one must not lose sight of the principle that there must be something present in those teachings to suggest to one skilled in the art that the claimed invention would have been obvious. *W.L. Gore and Associates, Inc. v. Garlock*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). All of the references must be considered in their entirety. *Id.* at 1552. By taking various elements of the multiple embodiments of Kodera et al. out of their context, rather than considering the teaching in their entirety, and combining them with Glover et al. or Burke et al., the Examiner has used the claims as a frame, to combine individual, naked parts to form a mosaic that approximates the claimed invention. Forming a mosaic in this way is inappropriate. *Id.* Although, the W.L. Gore case was concerned with the combining of multiple separate prior art references, the same analysis should apply when a single reference incorporates multiple, distinct, inventions, or embodiments, as is the case in Kodera et al.

CONCLUSION

Throughout this discussion applicant has focused on Kodera et al. This does equate with attacking a single reference. On the contrary, Kodera et al. is the focus of so much attention because if the elements pulled from Kodera et al. are found lacking, there is no indication that these elements can be provided by either of the remaining references. Also Kodera et al. is in a sense a being combined with itself as the basis of this rejection, since it contains multiple

embodiments none of which suggest that they should be combined.

For the extensive reasons advanced above, and in the Appeal Brief, Applicants respectfully contend that the Examiner has not met the necessary burden for a *prima facie* case of obviousness, and further that each claim is nonobvious in light of the cited prior art and otherwise patentable. No teaching or suggestion to combine the three references has been provided. Furthermore, the combination of elements extracted from Kodera *et al.* without reading the teachings as a whole tend to suggest that the rejection was at least in part the result of inappropriate hindsight analysis. Therefore, reversal of all rejections is courteously requested.

Respectfully submitted,

Date: 3/1/04

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